Title (en)

Apparatus and method for evaluating characteristics of target molecules

Title (de)

Vorrichtung und Verfahren zur Beurteilung der Eigenschaften von Zielmolekülen

Title (fr)

Appareil et procédé d'évaluation des caractéristiques de molécules cible

Publication

EP 2434021 A1 20120328 (EN)

Application

EP 10180282 A 20100927

Priority

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Abstract (en)

Disclosed herein are an apparatus (20) and a method for evaluating one or more characteristics of target molecules. The apparatus comprises means (22) for receiving a biochip comprising a substrate (16) to which charged probe molecules (10) are attached. The probe molecules have a marker (12) for allowing to generate signals indicative of the distance of a portion of the probe molecule (10) from the substrate (16). The apparatus comprises means (34, 38 - 44) for detecting the signal and means (28, 29) for generating an external electric field to which the probe molecules (10) are exposed. A control means controls the electric field generating means (28) to (A) apply an external electric field causing the portion of the probe molecule (10) to approach said substrate (16) and (B) apply an external electric field causing the portion of the probe molecule (10) to move away from said substrate (16). The signal detecting means (34, 38 - 44) records the signal as a function of time during step (A) and/or step (B). Steps (A) and (B) are repeated for a predetermined number of times and the recorded signals are combined such as to generate an averaged time-resolved signal indicative of the process of said part of the probe molecule (10) approaching the substrate (16) and/or moving away from the substrate (16).

IPC 8 full level

C12Q 1/68 (2006.01); **G01N 21/64** (2006.01); **G01N 27/02** (2006.01)

CPC (source: EP US)

C12Q 1/6825 (2013.01 - EP US); **G01N 21/6408** (2013.01 - EP US); **G01N 21/6458** (2013.01 - EP US); **G01N 27/327** (2013.01 - US); **G01N 27/44726** (2013.01 - US); **G01N 27/44756** (2013.01 - US); **G01N 33/5438** (2013.01 - EP US); C12Q 1/6823 (2013.01 - EP US); G01N 2021/6432 (2013.01 - EP US)

Citation (applicant)

- EP 2192401 A1 20100602 - FUJITSU LTD [JP], et al
- US 2005069932 A1 20050331 - ARINAGA KENJI [JP], et al
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Citation (search report)

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Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

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DOCDB simple family (publication)

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DOCDB simple family (application)

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